

Transmission Outages

The transmission grid consists of redundant interconnections for transmission lines to help ensure adequate and reliable power to consumers. If one transmission line is out of service due to maintenance, repairs or other factors, electrical power is rerouted through other transmission lines to continue on its path. However, sometimes the extra load placed on transmission lines can lead to overloads and subsequent outages. This is not a very common occurrence as most transmission systems are designed with the adequate capacity to meet backup needs.

Blackout

A blackout is a total loss of electrical power service in a given area. Blackouts may last from a few minutes to weeks in more severe cases. Blackouts are typically caused by equipment/systems failures or weather-related complications.

A rolling blackout is typically a controlled series of interruptions of electrical power service. A rolling blackout involves the process of load shedding in which preselected power demand is removed from the power system to help maintain system integrity. While a rolling blackout is usually a preplanned outage, there is usually not much if any advance notice.

Rolling blackouts are a last-resort measure used to prevent a total blackout of an electrical power system. Rolling blackouts may be instigated in response to a situation where the demand for electricity exceeds the power supply capability of the network. Rolling blackouts are typically caused by insufficient generation capacity (high-load demand) or inadequate transmission infrastructure.

Brownout

A brownout is a partial, temporary reduction in electric power service. During a brownout, the electrical power supply is never totally lost, there is just a decrease in the system's voltage. Brownouts are usually deliberate and controlled events that are used to prevent complete system failure.

Scheduled Outages

A scheduled outage occurs when a portion of a power system is shut down intentionally. Scheduled outages differ from other power outages in that they are usually planned and announced well in advance. Scheduled transmission line outages are typically preplanned for activities such as routine maintenance, improvements, or repair. Transmission system construction or maintenance can be especially difficult or impossible during peak customer load periods. This has resulted in some energy electrical-delivery utilities to develop work practices and technical skills of associates to maintain transmission lines and associated circuits while they remain in service carrying energy to customers.